

flow-control means for communicating traffic information between a first multiplicity of neighboring nodes of a first node of the plurality of nodes, with the first node capable of communicating a respective packet to a node in the first multiplicity of neighboring nodes, with the traffic information including traffic density at each of the first multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the first node, having a respective destination address of a respective destination node of the plurality of nodes, for selecting a second node of the first multiplicity of neighboring nodes, said flow-control means for routing, responsive to the traffic information, the respective packet through the second node to the respective destination node.

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~~10~~. The distributed network, as set forth in claim ⁴~~9~~, with said flow-control means for communicating traffic information between a second multiplicity of neighboring nodes of the second node, with the second node capable of communication the respective packet to a node in the second multiplicity of neighboring nodes, with the traffic information including traffic density at each of the second multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the second node, having the respective destination address of the respective destination node, for selecting a third node of the

second multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the third node to the respective destination node.

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~~11~~. The distributed network, as set forth in claim ⁵~~10~~, with said flow-control means for communicating traffic information between a third multiplicity of neighboring nodes of the third node, with the third node capable of communicating the respective packet to a node in the third multiplicity of neighboring nodes, with the traffic information including traffic density at each of the third multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the third node, having the respective destination address of the respective destination node, for selecting a fourth node of the third multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the fourth node to the respective destination node.

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But
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~~12~~. The distributed network, as set forth in claim ⁶~~11~~, with said flow-control means for communicating traffic information between a fourth multiplicity of neighboring nodes of the fourth node, with the fourth node capable of communicating the respective packet to a node in the fourth

10 multiplicity of neighboring nodes, with the traffic information including traffic density at each of the fourth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the fourth node, having the respective destination address of the respective destination node, for selecting a fifth node of the fourth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the fifth node to the respective destination node.

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~~13~~. The distributed network, as set forth in claim ~~12~~, with said flow-control means for communicating traffic information between a fifth multiplicity of neighboring nodes of the fifth node, with the fifth node capable of communicating the respective packet to a node in the fifth multiplicity of neighboring nodes, with the traffic information including traffic density at each of the fifth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information and to the respective packet, from the fifth node, having the respective destination address of the respective destination node, for selecting a sixth node of the fifth multiplicity of neighboring nodes, said flow-control means, responsive to the traffic information, for routing the respective packet through the sixth node to the respective destination node.

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14. The distributed network, as set forth in claim ~~13~~⁸,
with said flow-control means for communicating traffic
information between a sixth multiplicity of neighboring nodes of
the sixth node, with the sixth node capable of communicating a
respective packet to a node in the sixth multiplicity of
neighboring nodes, with the traffic information including
traffic density at each of the sixth multiplicity of neighboring
nodes, said flow-control means, responsive to the traffic
information and to the respective packet, from the sixth node,
having the respective destination address of the respective
destination node, for selecting a seventh node of the sixth
multiplicity of neighboring nodes, said flow-control means,
responsive to the traffic information, for routing the
respective packet through the seventh node to the respective
destination node.

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~~15~~. A distributed network, spread-spectrum system,
comprising:

a plurality of remote stations;
a plurality of nodes for covering a geographic area,
each node in the plurality of nodes for communicating, with one
or more remote stations of the plurality of remote stations,
using packets having a destination address and modulated with
spread-spectrum modulation, with each packet transmitted between
a respective node and remote station using radio waves; and

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flow-control means for communicating first traffic
information between a first multiplicity of neighboring nodes of
a first node of the plurality of nodes, with the first node
capable of communicating a respective packet to a node in the
first multiplicity of neighboring nodes, with the first traffic
15 information including traffic density at each of the first
multiplicity of neighboring nodes, said flow-control means,
responsive to the first traffic information and to the
respective packet, from the first node, having a respective
destination address of a respective destination node of the
plurality of nodes, for selecting a second node of the first
multiplicity of neighboring nodes, said flow-control means for
responsive to the first traffic information, the respective
packet through the second node to the respective destination
node.

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20 Cont.
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16. The distributed network, as set forth in claim ¹⁰~~15~~,
with said flow-control means for communicating second traffic
information between a second multiplicity of neighboring nodes
of the second node, with the second node capable of
5 communicating a respective packet to a node in the second
multiplicity of neighboring nodes, with the second traffic
information including traffic density at each of the second
multiplicity of neighboring nodes, said flow-control means,
responsive to the second traffic information and to the
respective packet, from the second node, having the respective

destination address of the respective destination node, for
selecting a third node of the second multiplicity of neighboring
nodes, said flow-control means, responsive to the second traffic
information, for routing the respective packet through the third
node to the respective destination node.

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~~17~~. The distributed network, as set forth in claim ¹¹~~16~~,
with said flow-control means for communicating third traffic
information between a third multiplicity of neighboring nodes of
the third node, with the third node capable of communicating a
respective packet to a node in the third multiplicity of
neighboring nodes, with the third traffic information including
traffic density at each of the third multiplicity of neighboring
nodes, said flow-control means, responsive to the third traffic
information and to the respective packet, from the third node,
having the respective destination address of the respective
destination node, for selecting a fourth node of the third
multiplicity of neighboring nodes, said flow-control means,
responsive to the third traffic information, for routing the
respective packet through the fourth node to the respective
destination node.

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~~18~~. The distributed network, as set forth in claim ¹²~~17~~,
with said flow-control means for communicating fourth traffic
information between a fourth multiplicity of neighboring nodes
of the fourth node, with the fourth node capable of

5 communicating a respective packet to a node in the fourth
multiplicity of neighboring nodes, with the fourth traffic
information including traffic density at each of the fourth
multiplicity of neighboring nodes, said flow-control means,
responsive to the fourth traffic information and to the
10 respective packet, from the fourth node, having the respective
destination address of the respective destination node, for
selecting a fifth node of the fourth multiplicity of neighboring
nodes, said flow-control means, responsive to the fourth traffic
information, for routing the respective packet through the fifth
node to the respective destination node.

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19. The distributed network, as set forth in claim ¹³~~18~~,
with said flow-control means for communicating fifth traffic
information between a fifth multiplicity of neighboring nodes of
the fifth node, with the fifth node capable of communicating a
5 respective packet to a node in the fifth multiplicity of
neighboring nodes, with the fifth traffic information including
traffic density at each of the fifth multiplicity of neighboring
nodes, said flow-control means, responsive to the fifth traffic
information and to the respective packet, from the fifth node,
10 having the respective destination address of the respective
destination node, for selecting a sixth node of the fifth
multiplicity of neighboring nodes, said flow-control means,
responsive to the fifth traffic information, for routing the
respective packet through the sixth node to the respective

15 destination node.

15
20. The distributed network, as set forth in claim 14,
with said flow-control means for communicating sixth traffic
information between a sixth multiplicity of neighboring nodes of
the sixth node, with the sixth node capable of communicating a
5 respective packet to a node in the sixth multiplicity of
neighboring nodes, with the sixth traffic information including
traffic density at each of the sixth multiplicity of neighboring
nodes, said flow-control means, responsive to the sixth traffic
information and to the respective packet, from the sixth node,
10 having the respective destination address of the respective
destination node, for selecting a seventh node of the sixth
multiplicity of neighboring nodes, said flow-control means,
responsive to the sixth traffic information, for routing the
respective packet through the seventh node to the respective
15 destination node.

16
21. A distributed network, spread-spectrum method, having
a plurality of remote stations and a plurality of nodes for
covering a geographic area, comprising the steps of:

communicating, between a node of the plurality of
5 nodes and one or more remote stations of the plurality of remote
stations, using packets having a destination address and
modulated with spread-spectrum modulation, with each packet

transmitted between a respective node and remote station using radio waves;

10 communicating traffic information between a first multiplicity of neighboring nodes of a first node of the plurality of nodes, with the first node capable of communicating a respective packet to a node in the first multiplicity of neighboring nodes, with the traffic information including
15 traffic density at each of the first multiplicity of neighboring nodes;

B1 Cont.
20 selecting, responsive to the traffic information and to the respective packet, from the first node, having a respective destination address of a respective destination node of the plurality of nodes, a second node of the first multiplicity of neighboring nodes; and

routing, responsive to the traffic information, the respective packet through the second node to the respective destination node.

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22. The distributed network, spread-spectrum method, as set forth in claim *16* ~~21~~, further comprising the steps:

5 communicating traffic information between a second multiplicity of neighboring nodes of the second node, with the second node capable of communication the respective packet to a node in the second multiplicity of neighboring nodes, with the traffic information including traffic density at each of the second multiplicity of neighboring nodes;

10 selecting, responsive to the traffic information and
to the respective packet, from the second node, having the
respective destination address of the respective destination
node, a third node of the second multiplicity of neighboring
nodes; and

15 routing, responsive to the traffic information, the
respective packet through the third node to the respective
destination node.

B¹ Cont.
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~~23~~. The distributed network, spread-spectrum method, as
set forth in claim ¹⁷~~22~~, further comprising the steps:

5 communicating traffic information between a third
multiplicity of neighboring nodes of the third node, with the
third node capable of communicating the respective packet to a
node in the third multiplicity of neighboring nodes, with the
traffic information including traffic density at each of the
third multiplicity of neighboring nodes;

10 selecting, responsive to the traffic information and
to the respective packet, from the third node, having the
respective destination address of the respective destination
node, a fourth node of the third multiplicity of neighboring
nodes; and

15 routing, responsive to the traffic information, the
respective packet through the fourth node to the respective
destination node.

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24. The distributed network, spread-spectrum method, as
set forth in claim ¹⁸23, further comprising the steps:

communicating traffic information between a fourth
multiplicity of neighboring nodes of the fourth node, with the
fourth node capable of communicating the respective packet to a
node in the fourth multiplicity of neighboring nodes, with the
traffic information including traffic density at each of the
fourth multiplicity of neighboring nodes;

selecting, responsive to the traffic information and
to the respective packet, from the fourth node, having the
respective destination address of the respective destination
node, a fifth node of the fourth multiplicity of neighboring
nodes; and

routing, responsive to the traffic information, the
respective packet through the fifth node to the respective
destination node.

²⁰
25. The distributed network, spread-spectrum method, as
set forth in claim ¹⁹24, further comprising the steps:

communicating traffic information between a fifth
multiplicity of neighboring nodes of the fifth node, with the
fifth node capable of communicating the respective packet to a
node in the fifth multiplicity of neighboring nodes, with the
traffic information including traffic density at each of the
fifth multiplicity of neighboring nodes;

selecting, responsive to the traffic information and

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10 to the respective packet, from the fifth node, having the
respective destination address of the respective destination
node, a sixth node of the fifth multiplicity of neighboring
nodes; and

15 routing, responsive to the traffic information, the
respective packet through the sixth node to the respective
destination node.

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26. The distributed network, spread-spectrum method, as
set forth in claim ²⁰25, further comprising the steps:

5 communicating traffic information between a sixth
multiplicity of neighboring nodes of the sixth node, with the
sixth node capable of communicating a respective packet to a
node in the sixth multiplicity of neighboring nodes, with the
traffic information including traffic density at each of the
sixth multiplicity of neighboring nodes;

10 selecting, responsive to the traffic information and
to the respective packet, from the sixth node, having the
respective destination address of the respective destination
node, for selecting a seventh node of the sixth multiplicity of
neighboring nodes; and

15 routing, responsive to the traffic information, the
respective packet through the seventh node to the respective
destination node.

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27.

A distributed network, spread-spectrum method, having a plurality of remote stations and a plurality of nodes for covering a geographic area, comprising the steps of:

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communicating, between a node of the plurality of nodes and one or more remote stations of the plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between a respective node and remote station using radio waves;

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communicating first traffic information between a first multiplicity of neighboring nodes of a first node of the plurality of nodes, with the first node capable of communicating a respective packet to a node in the first multiplicity of neighboring nodes, with the first traffic information including traffic density at each of the first multiplicity of neighboring nodes;

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selecting, responsive to the first traffic information and to the respective packet, from the first node, having a respective destination address of a respective destination node of the plurality of nodes, a second node of the first multiplicity of neighboring nodes; and

routing, responsive to the first traffic information, the respective packet through the second node to the respective destination node.

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The distributed network, spread-spectrum method, as

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set forth in claim ~~27~~, further comprising the steps:,

communicating second traffic information between a second multiplicity of neighboring nodes of the second node, with the second node capable of communicating a respective packet to a node in the second multiplicity of neighboring nodes, with the second traffic information including traffic density at each of the second multiplicity of neighboring nodes;

10. *B1 cont.*
selecting, responsive to the second traffic information and to the respective packet, from the second node, having the respective destination address of the respective destination node, a third node of the second multiplicity of neighboring nodes; and

15 routing, responsive to the second traffic information, the respective packet through the third node to the respective destination node.

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~~29~~. The distributed network, spread-spectrum method, as set forth in claim ~~28~~, further comprising the steps:

5 communicating third traffic information between a third multiplicity of neighboring nodes of the third node, with the third node capable of communicating a respective packet to a node in the third multiplicity of neighboring nodes, with the third traffic information including traffic density at each of the third multiplicity of neighboring nodes;

selecting, responsive to the third traffic information and to the respective packet, from the third node, having the

respective destination address of the respective destination node, a fourth node of the third multiplicity of neighboring nodes; and

15 routing, responsive to the third traffic information, the respective packet through the fourth node to the respective destination node.

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~~30~~. The distributed network, spread-spectrum method, as set forth in claim ²⁴~~29~~, further comprising the steps:

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5 communicating fourth traffic information between a fourth multiplicity of neighboring nodes of the fourth node, with the fourth node capable of communicating a respective packet to a node in the fourth multiplicity of neighboring nodes, with the fourth traffic information including traffic density at each of the fourth multiplicity of neighboring nodes;

10 selecting, responsive to the fourth traffic information and to the respective packet, from the fourth node, having the respective destination address of the respective destination node, a fifth node of the fourth multiplicity of neighboring nodes; and

15 routing, responsive to the fourth traffic information, the respective packet through the fifth node to the respective destination node.

²⁶
~~31~~. The distributed network, spread-spectrum method, as set forth in claim ²⁵~~30~~, further comprising the steps:

communicating fifth traffic information between a fifth multiplicity of neighboring nodes of the fifth node, with the fifth node capable of communicating a respective packet to a node in the fifth multiplicity of neighboring nodes, with the fifth traffic information including traffic density at each of the fifth multiplicity of neighboring nodes;1

selecting, responsive to the fifth traffic information and to the respective packet, from the fifth node, having the respective destination address of the respective destination node, a sixth node of the fifth multiplicity of neighboring nodes; and

routing, responsive to the fifth traffic information, the respective packet through the sixth node to the respective destination node.

²⁷
~~32~~. The distributed network, spread-spectrum method, as set forth in claim ²⁶~~31~~, further comprising the steps:

communicating sixth traffic information between a sixth multiplicity of neighboring nodes of the sixth node, with the sixth node capable of communicating a respective packet to a node in the sixth multiplicity of neighboring nodes, with the sixth traffic information including traffic density at each of the sixth multiplicity of neighboring nodes;

selecting, responsive to the sixth traffic information and to the respective packet, from the sixth node, having the

respective destination address of the respective destination node, a seventh node of the sixth multiplicity of neighboring nodes; and

routing, responsive to the sixth traffic information, the respective packet through the seventh node to the respective destination node.

33. The distributed network as set forth in claim 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or 20, with said flow-control means including means for communicating with radio waves.

34. The distributed network as set forth in claim 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or 20, with said flow-control means including means for communicating with spread-spectrum modulation using radio waves.

35. The distributed-network, spread-spectrum method as set forth in claim 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 or 32, with the routing step including the step of modulating the packet with spread-spectrum modulation.

36. The distributed-network, spread-spectrum method as set forth in claim 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 or 32, with the routing step including the step of transmitting, using radio waves, the packet with spread-spectrum modulation.

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A distributed network, spread-spectrum system, comprising:

a plurality of remote stations;

a plurality of nodes for covering a geographic area, each node in the plurality of nodes for communicating, with one or more remote stations of the plurality of remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between a respective node and remote station using radio waves; and

flow-control means for communicating traffic information between the plurality of nodes, with the traffic information including traffic density at each of the plurality of nodes, said flow-control means, responsive to the traffic information and to a respective packet, from a first node, having a respective destination address of a respective destination node of the plurality of nodes, for selecting a path of a multiplicity of nodes through the plurality of nodes to the destination node, said flow-control means for routing, responsive to the traffic information, the respective packet through the path of the multiplicity of nodes to the respective destination node.

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A distributed network, spread-spectrum method, having a plurality of nodes, comprising the steps of:

communicating, to a respective node of the plurality of nodes, with one or more remote stations of a plurality of

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remote stations, using packets having a destination address and modulated with spread-spectrum modulation, with each packet transmitted between the respective node and remote station using radio waves;

communicating traffic information between the plurality of nodes, with the traffic information including traffic density at each of the plurality of nodes;

selecting, responsive to the traffic information and to a respective packet, from the respective node, having a respective destination address of a respective destination node of the plurality of nodes, a path of a multiplicity of nodes through the plurality of nodes to the destination node; and

routing, responsive to the traffic information, the respective packet through the path of the multiplicity of nodes to the respective destination node.

B1 Cont.
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~~39~~. The distributed network as set for im claim ³²~~37~~, with said flow-control means including means for communicating with radio waves.

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~~40~~. The distributed network as set for im claim ³²~~37~~, with said flow-control means including means for communicating with spread-spectrum modulation using radio waves.

³⁶
~~41~~. The distributed-network, spread-spectrum method as set forth in claim ³³~~38~~, with the routing step including the step of